

On the Decrease in the Life Expectancy of Black Males in Michigan

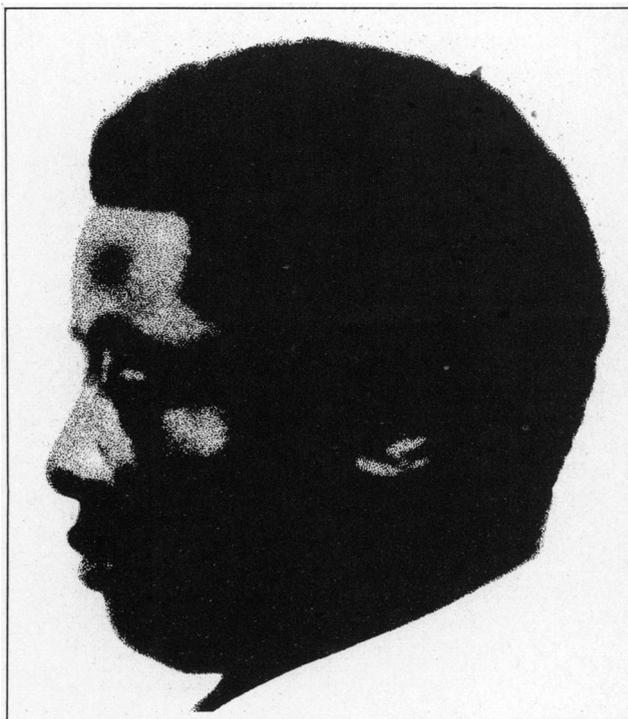
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IN THE UNITED STATES, age-adjusted mortality rates for nonwhite male and female residents have for some time been approximately 40 percent higher than comparable figures for their white counterparts. Life expectancy, as a result, has been about 5 years lower. This disparity has been masked in published crude mortality statistics, since these do not reflect the nonwhite popula-



tion's higher percentage of younger residents and concomitantly lower percentage of older residents.

Age-specific and age-adjusted mortality rates declined fairly steadily during most of the present century for each of the four race and sex groups. This decrease has continued to the present time for both white and nonwhite females. However, between 1960 and 1970 age-specific rates with few exceptions remained essentially unchanged for white males and increased quite appreciably for nonwhite males. By 1970, life expectancy was approximately 61 years for nonwhite males, 68 years for white males, 69 years for nonwhite females, and 75 years for white females.

We present Michigan data for 1959-61 and 1969-71, focusing on the relative impact of various causes of death and on variations in mortality rates at specific age levels. We discuss possible cultural, economic, and social issues related to the trends noted and consider the implications of the widening disparity in rates. Available statistics for the United States for the years 1959-61 and 1969-71 indicate comparable trends.

Analysis of Findings

Michigan's total population increased 13.4 percent, from 7,823,000 to 8,875,000, between 1960 and 1970. During the same period, the number of nonwhite residents increased 41.4 percent, from 737,000 to 1,042,000. Approximately half of this higher growth rate reflects the continuing substantial immigration of younger nonwhite males (and their families) seeking employment in automobile-related professions, particularly in the first half of the decade. More than 95 percent of all nonwhite Michigan residents are black, and the terms nonwhite and black therefore are used interchangeably. Approximately 75 percent of nonwhite residents, but only 10 percent of white residents, live in Detroit, Michigan's

largest city. Most of the rest live in the State's other urban centers.

In 1959-61, annual age-adjusted mortality rates were 10.1 per 1,000 for white males, 6.6 for white females, 11.4 for nonwhite males, and 9.1 for nonwhite females (table 1). By 1969-71, these rates had remained unchanged for white males, decreased 10.6 percent for white females, increased 15.8 percent for nonwhite males, and decreased 6.6 percent for nonwhite females.

In the following table, the race-sex-age-adjusted mortality rates are given as a percent of the 1959-61 total mortality rate for the State:

Group	1959-61	1969-71	Change
White female -----	76.7	68.6	- 8.1
White male -----	117.4	117.4	0
Nonwhite female -----	105.6	98.5	- 7.1
Nonwhite male -----	132.6	153.5	+20.9

In 1959-61, mortality for black males was 32.6 percent above the general State rate. By 1969-71, this excess was 53.5 percent. Conversely, white females, the group with the lowest rate, were 23.3 percent below the State average in 1959-61 and 31.4 percent in 1969-71. In the latter period, the age-adjusted mortality rate for black males was more than twice the comparable figure for white females.

Approximately two-thirds of the increase in the age-adjusted mortality rate for black males resulted from a dramatic rise in deaths in the 15-44 age group. Between 1959-61 and 1969-71, rates increased 131.3 percent at ages 15-24, 100.0 percent at ages 25-34, and 71.7 percent at ages 35-44 (table 1). Concurrently, they remained essentially unchanged in this age group for the three other race-sex groups. In comparison with rates for white males, those for black males in 1959-61 were 14.3 percent higher at ages 15-24, 75.0 percent higher

Table 1. Annual age-specific mortality rates per 1,000 by race and sex, Michigan, 1959-61 and 1969-71

Age group (years)	White male		White female		Nonwhite male		Nonwhite female	
	1959-61	1969-71	1959-61	1969-71	1959-61	1969-71	1959-61	1969-71
Total (crude)	10.2	10.1	7.2	7.3	8.7	10.6	6.8	7.0
Age adjusted	10.1	10.1	6.6	5.9	11.4	13.2	9.1	8.5
Less than 1	26.2	20.7	19.5	15.5	43.4	38.2	34.1	30.7
1-4	0.9	0.8	0.8	0.7	1.3	1.3	1.0	1.2
5-14	0.5	0.5	0.3	0.3	0.5	0.6	0.4	0.4
15-24	1.4	1.7	0.5	0.6	1.6	3.7	1.0	1.1
25-34	1.6	1.6	0.8	0.8	2.8	5.6	2.3	2.1
35-44	2.8	3.2	1.8	2.0	5.3	9.1	4.6	4.8
45-54	8.8	8.4	4.7	4.5	12.6	15.4	10.2	9.6
55-64	21.6	21.6	11.1	10.4	26.6	29.1	22.0	18.9
65-74	49.5	49.4	28.9	25.9	53.5	53.9	39.1	36.3
75-84	106.6	106.5	78.9	68.7	78.6	90.7	63.1	63.0
85 and older	220.2	194.4	195.4	162.0	136.7	108.8	127.2	96.2

Table 2. Annual mortality rates per 100,000 in the age group 15-44 years by race, sex, and leading causes of death, Michigan, 1959-61 and 1969-71

Cause of death	White male		White female		Nonwhite male		Nonwhite female	
	1959-61	1969-71	1959-61	1969-71	1959-61	1969-71	1959-61	1969-71
Total	195.7	209.2	106.5	103.5	336.3	566.1	269.4	240.6
Heart disease	42.2	29.1	11.8	8.8	58.4	58.0	45.2	28.6
Cancer	24.4	24.7	30.3	24.5	31.4	28.5	47.0	29.2
Vascular lesions	5.8	4.9	5.2	5.0	18.0	15.1	23.0	18.6
Influenza and pneumonia	3.3	3.8	2.8	3.1	11.1	24.3	12.6	10.2
Diabetes	3.0	2.4	2.4	2.0	7.6	7.0	4.8	6.5
Accidents	67.2	84.2	15.9	23.6	59.7	95.4	19.3	27.2
Homicides	3.5	8.6	1.6	2.8	54.0	181.7	18.4	28.2
All other	46.3	51.6	36.5	33.6	96.2	156.0	99.1	91.9

at ages 25-34, and 89.3 percent higher at ages 35-44. By 1969-71, they were 117.6, 250.0, and 184.4 percent higher, respectively. In comparison with similar figures for black females, these percentages were 60.0, 21.7, and 15.2 higher in 1959-61 and 236.4, 166.7, and 89.6 higher in 1969-71. The most dramatic absolute and relative rise occurred in the age group 15-24.

Approximately two-thirds of this increase in deaths of black males in the age group 15-44 was in turn caused by a major rise in mortality from two causes—accidents and homicides (table 2). Between 1959-61 and 1969-71, the death rate per 100,000 for accidents increased from 59.7 to 95.4 while the rate for homicides rose from 54.0 to 181.7. These two causes accounted for approximately a third of all deaths of black males in this age group in 1959-61 compared with one-half in 1969-71. In comparison with rates for white males, rates for black males in 1959-61 were 11.2 percent lower for accidents and 1,442.8 percent higher for homicides. By 1969-71, the comparable figures were 13.3 and 2,012.8

percent higher, respectively, for black males. In comparison with black females, rates for black males were 209.3 and 193.5 percent higher in 1959-61 and 250.7 and 544.3 percent higher in 1969-71. Concurrently, while death rates for black males decreased for a number of other leading causes such as heart disease, cancer, vascular lesions, and diabetes, they generally remained higher than the rates for each of the other three race and sex groups.

At age 15, black males in 1969-71 had a life expectancy of 49.1 years, a decrease of 3.7 years from the 52.8 noted in 1959-61 (table 3). This 49.1-year life expectancy was 6.0 years less than the comparable 55.1 years for white males, 8.1 years less than the 57.2 years for black females, and 13.0 years less than the 62.1 years for white females. The gap gradually decreased with advancing age. Beginning at age 65, life expectancy of black males exceeded that for white males.

In 1959-61 and 1969-71, white males, white females, and nonwhite females at birth had a 70 to 75 percent

Table 3. Life expectancy at specified age levels by race and sex, Michigan, 1959-61 and 1969-71

Age (years)	White male		White female		Nonwhite male		Nonwhite female	
	1959-61	1969-71	1959-61	1969-71	1959-61	1969-71	1959-61	1969-71
0	67.7	68.1	74.7	75.5	64.3	61.1	68.0	69.4
1	68.5	68.6	75.2	75.6	66.2	62.5	69.4	70.6
5	64.8	64.8	71.3	71.8	62.5	58.8	65.7	67.0
15	55.1	55.1	61.5	62.1	52.8	49.1	55.9	57.2
25	45.8	45.9	51.7	52.4	43.6	40.7	46.4	47.8
35	36.5	36.6	42.0	42.8	34.6	32.8	37.3	38.7
45	27.3	27.6	32.6	32.5	26.2	25.4	28.4	30.4
55	19.4	19.5	23.8	24.8	19.0	18.8	21.4	22.9
65	12.7	12.9	15.9	16.9	13.3	13.4	15.4	16.5
75	7.8	8.1	9.4	10.4	9.3	9.7	10.4	11.6
85	4.3	5.2	4.8	6.0	5.1	7.5	5.4	7.8

Table 4. Probability of eventually dying from specified causes by race and sex, Michigan, 1959-61 and 1969-71

Cause of death	White male		White female		Nonwhite male		Nonwhite female	
	1959-61	1969-71	1959-61	1969-71	1959-61	1969-71	1959-61	1969-71
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Heart disease	43.2	43.0	41.0	43.0	34.4	32.5	37.4	38.4
Cancer	16.0	17.4	16.0	16.1	17.2	16.8	14.0	14.3
Vascular lesions	11.2	9.3	16.6	14.4	12.8	9.0	18.3	15.4
Influenza and pneumonia	2.8	2.7	2.3	2.8	4.6	4.3	4.4	4.0
Diabetes	1.9	2.2	3.6	3.6	1.7	2.3	4.1	4.8
Accidents	5.2	5.4	3.7	3.2	4.7	5.8	2.3	2.5
Homicides	0.2	0.5	0.1	0.1	2.9	6.9	1.2	1.3
All other	19.5	19.6	16.7	16.8	21.8	22.6	18.4	19.5

probability of eventually dying from the three leading causes of death—heart disease, cancer, and vascular lesions (table 4). This probability for nonwhite males was 64.4 percent in 1959-61 and 58.3 percent in 1969-71. This decrease was balanced by an increase in the probability of dying from accidents (from 4.7 to 5.8 percent) and from homicides (from 2.9 to 6.9 percent). Given current rates, one of eight black males in Michigan ultimately will die from an accident or from homicide. This probability is 1 of 17 for white males, 1 of 30 for white females and 1 of 26 for nonwhite females.

If the 1969-71 rates are used, elimination of deaths from heart disease would increase the life expectancy in each of the four race-sex groups by 5 to 6 years with the least impact (5.1 years) on black males (table 5). Should no further deaths caused by cancer occur, life expectancy would rise about 2.5 years among persons in each of these race-sex groups. Homicides, which reduced the life expectancy of black males by 0.8 year in 1959-61, were responsible for a reduction of 2.3 years in 1969-71 compared with 0.2 year for white males, less than 0.05 year for white females, and 0.5 year for black

females. That is, homicides and cancer had virtually an equal impact on reducing black males' life expectancy. The impact of accidents as well as influenza and pneumonia in reducing black males' life expectancy was also relatively large.

Discussion

These facts surely should be a matter of major concern. Among the questions raised are the reasons for the reduced life expectancy of black males, the possibility of errors in these rates resulting from selective census underenumeration, the impact of the relatively large black male immigration, and whether remedial actions are available. While some definitive responses readily come to mind, others cannot be documented or may be open to question. It would certainly appear, however, that the trends noted resulted from the interaction of a number of factors or conditions.

While census underenumeration occurs at all age levels in each of the race-sex groups, it is particularly pronounced among young black males. We do not know its magnitude in Michigan, but we are not aware of any

Table 5. Reductions in years of life expectancy due to specific causes of death by race and sex, Michigan 1959-61 and 1969-71

Cause of death	White male		White female		Nonwhite male		Nonwhite female	
	1959-61	1969-71	1959-61	1969-71	1959-61	1969-71	1959-61	1969-71
Heart disease	6.5	6.6	5.3	5.7	5.4	5.1	5.8	6.0
Cancer	1.9	2.5	1.9	2.7	2.5	2.6	2.4	2.6
Vascular lesions	1.1	1.0	1.9	1.5	1.3	1.2	2.2	2.2
Influenza and pneumonia	0.5	0.4	0.3	0.4	0.9	0.8	0.8	0.8
Diabetes	0.2	0.7	0.4	0.4	0.2	0.3	0.6	0.8
Accidents	1.5	1.5	0.9	0.8	1.3	1.7	0.6	0.8
Homicides	0.1	0.2	(¹)	(¹)	0.8	2.3	0.3	0.5

¹ Less than 0.05 year.

evidence that underenumeration occurred more frequently in 1970 than in 1960. We therefore do not believe that this could account for the trends reported here.

As documented, most directly responsible for the decrease in black males' life expectancy has been the dramatic increase in homicides, particularly in the 15-44 age group. In fact, the number has continued to rise steeply, virtually doubling in the 1970-74 period, and in 1974 it was at a record level. While preliminary figures for 1975 show a decrease in the number of deaths due to homicide, an analysis of factors responsible for this reversal is not available. However, Detroit Police Chief Philip Tannian attributes this decline in part to the efforts of a special police unit, Squad Six, in reducing the number of execution-style murders.

More than three-quarters of all homicides of black males in 1973 in Michigan were caused by handguns, primarily either in a crime of passion between relatives or acquaintances, in inter-gang warfare, or as the end result of the commission of a crime. Handguns are readily available in our major cities and the number in the hands of private citizens, while unknown, is estimated to be in the hundreds of thousands or even millions. The data presented provide an indication of the need for vigorous enforcement in Michigan of existing statutes as well as consideration of new legislation to control and limit the manufacture, distribution, and possession of handguns. It may be argued logically that the rising and excessive homicide rate among black males is directly related to cultural, economic, and social issues which ultimately must be reconciled and resolved. However, such effort would require a long-range, continuing commitment and does not preclude the need for concurrent

preventive actions related to manifestations of these issues.

The census-enumerated number of black residents increased 40 percent in Michigan between 1960 and 1970. This figure was even higher in the younger ages and was particularly pronounced in the city of Detroit. Unemployment and underemployment are appreciably above the State and national average in that city and have resulted in a widening economic gap. It is our impression also that jobs associated with actual or potential health hazards are filled increasingly by black males. Rigorous enforcement of safety standards and pollution control requirements as well as expanded vocational training with the potential for meaningful upward mobility would all appear to be indicated.

In northern industrial States such as Michigan, black residents can be expected to continue living primarily in innercore areas of large cities. The ongoing drift of health manpower and facilities to the suburbs beyond the city limits must be halted and reversed. Reasonable access to required services as well as some equitable third-party payment mechanism would appear to be among the essential factors in bridging presently existing gaps.

It is possible that mortality rates have been rising among black males because of the large-scale migration from southern States of persons concentrated in the lowest socioeconomic levels. This immigration has now virtually ceased and there is, in fact, evidence of considerable outmigration. We cannot document the relative impact of this migration nor do we know whether black male mortality rates differ between long-term residents and recent arrivals. A detailed analysis within the context of socioeconomic and cultural variables is indicated.

SYNOPSIS

GORWITZ, KURT (Office of Health and Medical Affairs, State of Michigan), and DENNIS, RUTH: *On the decrease in the life expectancy of black males in Michigan. Public Health Reports, Vol. 91, March-April 1976, pp. 141-145.*

The 1970 census reported that there were slightly more than 1 million nonwhites among Michigan's 8,875,000 residents. Ninety-five percent of these nonwhites are black, and 75 percent live within the city limits of Detroit, compared with 10 percent of the State's white residents.

Between 1959-61 and 1969-71, life expectancy at birth increased

about 1 year for black and white females, essentially remained unchanged for white males, and decreased more than 3 years for black males. In 1969-71, life expectancy was 61 years for black males, 68 years for white males, 69 years for black females, and 75 years for white females.

Much of this growing disparity noted resulted from a dramatic rise in deaths of black males in the 15-44 year age group. Two-thirds of this increase was caused by a major rise in mortality from two causes—accidents and homicides. While death rates for black males decreased for a number of other lead-

ing causes, these generally remained higher than similar figures for each of the other three race-sex groups.

Given current rates, one of eight black males in Michigan ultimately will die from an accident or from homicide. This probability is 1 of 17 for white males, 1 of 30 for white females, and 1 of 26 for nonwhite females. Homicides reduced the life expectancy of black males by 2.3 years, compared with 0.2 year for white males, less than 0.05 year for white females, and 0.5 year for black females. More than three-quarters of all homicides of black males in Michigan in 1973 were caused by handguns.